

(FILE 'HOME' ENTERED AT 23:40:53 ON 04 JUN 2006)

FILE 'USPATFULL, CAPLUS' ENTERED AT 23:41:06 ON 04 JUN 2006

L1 1475 FILE USPATFULL
L2 627 FILE CAPLUS
TOTAL FOR ALL FILES
L3 2102 S BODY (3A) (ODOR? OR ODOUR?)
L4 3 FILE USPATFULL
L5 3 FILE CAPLUS
TOTAL FOR ALL FILES
L6 6 S L3 AND (ARYLSULFATASE?)
L7 3 FILE USPATFULL
L8 2 FILE CAPLUS
TOTAL FOR ALL FILES
L9 5 S L3 AND (ARYL (2A) SULFATASE?)
L10 3 FILE USPATFULL
L11 2 FILE CAPLUS
TOTAL FOR ALL FILES
L12 5 S L3 AND (ARYL-SULFATASE?)
L13 5 FILE USPATFULL
L14 5 FILE CAPLUS
TOTAL FOR ALL FILES
L15 10 S L6 OR L9 OR L12

=> save all

ENTER NAME OR (END):end

=> save all temp

ENTER NAME OR (END):deodorant/1

L# LIST L1-L15 HAS BEEN SAVED AS 'DEODORANT/L'

75% OF LIMIT FOR SAVED L# LISTS REACHED

=> s l15 and ((hydroxy diphenyl ether) or (hydroxydiphenylether) or (hydroxy-diphenylether))

L16 1 FILE USPATFULL

L17 0 FILE CAPLUS

TOTAL FOR ALL FILES

L18 1 L15 AND ((HYDROXY DIPHENYL ETHER) OR (HYDROXYDIPHENYLETHER) OR (HYDROXY-DIPHENYLETHER))

=> s body (3a) (odor? or odour?)

L1 1475 FILE USPATFULL

L2 627 FILE CAPLUS

TOTAL FOR ALL FILES

L3 2102 BODY (3A) (ODOR? OR ODOUR?)

=> s l3 and (arylsulfatase?)

L4 3 FILE USPATFULL

L5 3 FILE CAPLUS

TOTAL FOR ALL FILES

L6 6 L3 AND (ARYLSULFATASE?)

=> s l3 and (aryl (2a) sulfatase?)

L7 3 FILE USPATFULL

L8 2 FILE CAPLUS

TOTAL FOR ALL FILES

L9 5 L3 AND (ARYL (2A) SULFATASE?)

=> s l3 and (aryl-sulfatase?)

L10 3 FILE USPATFULL

L11 2 FILE CAPLUS

TOTAL FOR ALL FILES

L12 5 L3 AND (ARYL-SULFATASE?)

=> s l6 or l9 or l12

L13 5 FILE USPATFULL

L14 5 FILE CAPLUS

TOTAL FOR ALL FILES

L15 10 L6 OR L9 OR L12

=> d 1-10 kwic, ibib

L15 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

AB In a study to determine the mechanism of generation of a significant component of **body odor**, steroidal axillary malodor, 9 of 10 high odor-forming men had β -glucuronidase and 9 of 10 low odor formers had little or none. Six of 8 high odor formers had detectable **aryl sulfatase** activity and 8 of 10 low odor formers had little or none.

ST **odor body** axillary enzyme; glucuronidase **body odor**; **aryl sulfatase body odor**

IT **Odor** and **Odorous** substances
(**body**, axillary, **aryl sulfatase** and β -glucuronidase in)

IT 9001-45-0, β -Glucuronidase 9016-17-5, **Aryl sulfatase**

RL: BIOL (Biological study)
(in axillary **body odor**)

ACCESSION NUMBER: 1990:628534 CAPLUS

DOCUMENT NUMBER: 113:228534

TITLE: A new mechanism for axillary malodor

AUTHOR(S): Eigen, Edward

CORPORATE SOURCE: USA

SOURCE: Journal of the Society of Cosmetic Chemists (1990),
41(2), 147-9

CODEN: JSCCA5; ISSN: 0037-9832

DOCUMENT TYPE: Journal

LANGUAGE: English

L15 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

AB . . . on a putative substrate, 3 β -androstenyl sulfate, was studied. All 3 isolates, 2 coryneform spp. and Staphylococcus hominis/epidermidis, appear to possess **aryl sulfatase** activity which can catalyze the desulfation of steroid sulfates whether they are saturated or unsatd.

ST steroid sulfate desulfation bacteria **body odor**

ACCESSION NUMBER: 1997:181350 CAPLUS

DOCUMENT NUMBER: 126:274611

TITLE: Transformation of steroid sulfates by human axillary bacteria. A mechanism for human odor formation?

AUTHOR(S): Gower, D. B.; Mallet, A. I.; Watkins, W. J.; Wallace, L. M.

CORPORATE SOURCE: Dep. Clin. Biochem., St. Bartholomew's and the Royal London Sch. Med. Dent., London, E1 2AD, UK

SOURCE: Biochemical Society Transactions (1997), 25(1), 16S
CODEN: BCSTB5; ISSN: 0300-5127

PUBLISHER: Portland Press

DOCUMENT TYPE: Journal

LANGUAGE: English

L15 ANSWER 5 OF 10 USPATFULL on STN

SUMM . . . active materials which are inhibitors of odor-producing axillary bacterial exoenzymes. More particularly, it concerns compounds which inhibit the bacterial exoenzymes **aryl sulfatase** and beta glucuronidase responsible for the production of steroidal axillary malodor.

SUMM . . . free steroids. The enzymes which hydrolyze the steroid esters can be any of several bacterial exoesterases--for example, beta-glucuronidase (beta-G) and **aryl sulfatase** (AS).

##STR2##

SUMM The prior art has disclosed various compositions and methods of combating **body odors** in the formulation of deodorant compositions containing deodorant active agents. As an example, U.S. Pat. No.4,565,693 to Marschner, assigned to. . .

SUMM . . . that the deodorant active material possessed the dual function of reducing odor by indirectly inhibiting bacterial growth and chemically neutralizing **body odors**. Certain ingredients, such as inorganic acids, organic acids or water soluble metal salts of fatty acids were thought to deactivate. . .

SUMM . . . more specific object of the invention is to provide deodorant compositions comprising deodorant active material which inhibit the bacterial exoenzymes **aryl sulfatase** and beta glucuronidase responsible for the production of steroidal axillary malodor.

SUMM **Aryl sulfatase** and beta-glucuronidase are the primary bacterial exoenzymes responsible for producing steroidal axillary odor. The deodorant active materials are inhibitors of. . .

DRWD FIG. 4 is a graphic illustration of **aryl sulfatase**, showing a decrease in relative reaction velocity with increasing concentration of three inhibitors;

DRWD FIG. 8 is a graphic illustration of **aryl sulfatase** reactions in the presence of hair treated with Zn-GLY;

DETD . . . hydrolyze steroid esters are responsible for producing steroidal axillary odor. These exoenzymes can be any of several bacterial exoesterases, but **aryl sulfatase** (AS) and beta-glucuronidase (beta-G) are the primary bacterial exoenzymes responsible for producing the steroidal axillary odor.

DETD The human **body** produces sterile, **odorless** apocrine sweat which deposits water-soluble, odorless steroid conjugates onto the hair and skin in the axilla. Bacterial exoenzymes secreted by. . .

DETD Various inhibiting compounds of bacterial exoenzymes, **aryl sulfatase** (AS) and beta-glucuronidase (beta-G), responsible for the production of axillary malodor were tested. Several inhibiting compounds were found which functioned. . .

DETD B-glucuronidase from E. coli and **aryl sulfatase** from Aerobacter aerogenes, 4-methyl umbelliferyl glucuronide, 4-methylumbelliferyl sulfate, 4-methylumbelliferone, and D-saccharic acid-.tangle-solidup.-lactone were purchased from Sigma Chemical Co. Sodium hexametaphosphate. . .

DETD . . . Ohio] as 10 "high-odor formers" and 10 "low-odor formers." Trypticase soy agar plates were prepared containing either 4-MUS (substrate for **aryl sulfatase**) or 4-MUG (substrate for beta-glucuronidase) at a concentration of 25 ppm. Elutions of the swabs were plated on both substrates,. . .

DETD SEMIQUANTITATIVE ASSAYS OF BETA-GLUCURONIDASE AND **ARYL SULFATASE**

DETD . . . ml of 0.1M Tris buffer, pH 7.0. In the first study, apocrine sweat was treated with beta-glucuronidase, (E. coli) and **aryl sulfatase** (Aerobacter aerogenes) at 0.01 mg/ml in Tris buffer, 0.1M, pH 7.0. The apocrine secretion was also treated with the lipophilic. . .

DETD . . . in sweat might produce axillary odor. Sterile, odorless, apocrine secretion was then treated with the individual bacterial enzymes, beta-glucuronidase and **aryl sulfatase** and

also with lipophilic diphtheroid and a mixed culture of axillary bacteria in sterile saline suspension. The results of the. . .

DETD . . . and characterize the implication of lipophilic diphtheroids, the enzyme substrates were exposed to cell-free culture medium. The medium exhibited both **aryl sulfatase** and beta-glucuronidase activity.

DETD . . . a beta-glucuronidase capable of cleaving asteroid glucuronide. From the screening tests it was shown that another class of hydrolytic enzyme, **aryl sulfatase**, was also present in the axillary strains.

DETD It was further shown that a beta-glucuronidase and an **aryl sulfatase**, both of bacterial origin, will cleave odorless compounds in sterile secretion to produce distinct axillary odor, thus implicating the hydrolytic. . .

DETD The generation of odor from the addition of beta-glucuronidase or **aryl sulfatase** or lipophilic diphtheroid to apocrine secretion, can be prevented by the inclusion of the enzyme inhibitor Zn++ and somewhat reduced. . .

DETD Zinc bound to hair acts as an effective inhibitor of two bacterial exoenzymes, **aryl sulfatase** and beta-glucuronidase, which are implicated in the production of steroidal axillary malodor. Clinical testing of the deodorant activity of this. . .

CLM What is claimed is:
2. A deodorant composition according to claim 1, wherein said bacterial exoenzymes are **aryl sulfatase** or beta-glucuronidase.

ACCESSION NUMBER: 97:56327 USPATFULL
TITLE: Deodorant compositions comprising inhibitors of odor-producing axillary bacterial exoenzymes
INVENTOR(S): Eigen, Edward, East Brunswick, NJ, United States
Froebe, Claudia, Piscataway, NJ, United States
PATENT ASSIGNEE(S): Colgate-Palmolive Company, New York, NY, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|--------------|
| PATENT INFORMATION: | US 5643559 | | 19970701 |
| APPLICATION INFO.: | US 1994-206919 | | 19940304 (8) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1991-785585, filed on 30 Oct 1991, now abandoned | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |
| PRIMARY EXAMINER: | Ivy, C. Warren | | |
| ASSISTANT EXAMINER: | Huang, Evelyn | | |
| LEGAL REPRESENTATIVE: | Ancel, Richard J., Serafino, James M. | | |
| NUMBER OF CLAIMS: | 9 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 10 Drawing Figure(s); 5 Drawing Page(s) | | |
| LINE COUNT: | 967 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L15 ANSWER 3 OF 10 USPATFULL on STN

AB A non-therapeutic method for the inhibition of β -glucuronidase.

Body odors result from the decomposition of steroid esters by β -glucuronidase. Specific β -glucuronidase-inhibiting compounds are disclosed.

SUMM . . . invention relates to the non-therapeutic use of selected β -glucuronidase-inhibiting substances in a cosmetic deodorant or antiperspirant composition for reducing the **body odor** caused by decomposition of steroid esters.

SUMM . . . and other fats as well as approx. 10% of proteins. The decomposition products of apocrine perspiration, which substantially contribute towards **body odor**, in particular axillary **body odor**, can be divided into two classes, on the one hand short-chain, in particular C.sub.4-C.sub.10-fatty acids, which can be linear, branched, . . . thereof. The metabolism products of androgens, in particular androstenol (5 α -androst-16-en-3 β -ol, 5 α -androst-16-en-3 α -ol) and androstenone (5 α -androst-16-en-3-one), for example, are involved in typical **body odor**, especially in men.

SUMM [0006] Combating **body odor** caused by steroids by inhibiting β -glucuronidase is known in the prior art, for example from the publications U.S. Pat. No. . . .

SUMM . . . concentrations at which no bacteriostatic or bactericidal action is yet found. It has been found, surprisingly, that the use of **aryl-sulfatase** inhibitors in deodorants is suitable, especially in men, for preventing the formation of **body odor**. It is possible here for the expert, in the context of his general technical knowledge, to coordinate the active compounds. . . .

DETD . . . well as soluble inorganic salts of copper(II), zinc and magnesium, in a cosmetic deodorant or antiperspirant composition for reducing the **body odor** caused by hydrolytic decomposition of steroid esters.

DETD [0058] The present invention also relates to a non-therapeutic method of reducing **body odor** by means of inhibition of β -glucuronidase on the skin, which is characterized in that a cosmetic deodorant or antiperspirant composition. . . .

DETD [0059] In a preferred embodiment, the non-therapeutic method for reducing **body odor** by means of β -glucuronidase-inhibiting substances is characterized in that it is employed on men.

CLM What is claimed is:

1. A non-therapeutic method for inhibiting or reducing **body odor** caused by the hydrolytic decomposition of steroid esters by β -glucuronidase comprising adding to a cosmetic deodorant or antiperspirant composition at. . . .

17. A non-therapeutic method for reducing **body odor** on the skin comprising applying a cosmetic deodorant or antiperspirant composition comprising at least one β -glucuronidase-inhibiting substance selected from the. . . .

19. The method of claim 17 wherein the **arylsulfatase** -inhibiting substances are employed for reducing **body odor** in men.

ACCESSION NUMBER:

2004:298605 USPATFULL

TITLE:

Beta-glucuronidase inhibitors for use in deodorants and antiperspirants

INVENTOR(S):

Banowski, Bernhard, Duesseldorf, GERMANY, FEDERAL REPUBLIC OF

Hoffmann, Daniele, Duesseldorf, GERMANY, FEDERAL REPUBLIC OF

Wadle, Armin, Erkrath, GERMANY, FEDERAL REPUBLIC OF

Siegert, Petra, Haan, GERMANY, FEDERAL REPUBLIC OF

Saettler, Andrea, Duesseldorf, GERMANY, FEDERAL

REPUBLIC OF

Gerke, Thomas, Neuss, GERMANY, FEDERAL REPUBLIC OF

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2004234466 | A1 | 20041125 |
| APPLICATION INFO.: | US 2004-838930 | A1 | 20040504 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. WO 2002-EP11981, filed on 26 Oct 2002, UNKNOWN | | |

| | NUMBER | DATE |
|-----------------------|--|----------|
| PRIORITY INFORMATION: | DE 2001-10154368 | 20011106 |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | HENKEL CORPORATION, THE TRIAD, SUITE 200, 2200 RENAISSANCE BLVD., GULPH MILLS, PA, 19406 | |
| NUMBER OF CLAIMS: | 19 | |
| EXEMPLARY CLAIM: | 1 | |

10/838930
Shelly Dodson